



State of Vermont

Department of Fish and Wildlife
Department of Forests, Parks and Recreation
Department of Environmental Conservation
State Geologist
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AGENCY OF NATURAL RESOURCES
Department of Environmental Conservation
Hazardous Materials Management Division
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October 25, 1995

Don Smith
US EPA Waste Management Division
Superfund Support Section (HSS CAN-7)
JFK Federal Building
Boston, MA 02203-2211

RE: Former Jard Facility, Bennington, Vermont, EPA ID#VTD048141741

Dear Mr. Smith:

Enclosed are copies of the analytical results for sediment samples collected by the Sites Management Section (SMS) on September 12, 1995. A map illustrating the sample location is also enclosed. A total of four sediment samples were collected. Three samples (SD-1, SD-2, SD-3) were collected from the Roaring Branch River. Sample SD-1 is considered to be representative of background conditions. Sample SD-2 was collected adjacent to Jard and SD-3 was collected downgradient of Jard. One sample (SD-4) was collected at the outfall of two corrugated steel culverts at the northwestern property boundary. All samples were analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), priority pollutant metals and polychlorinated biphenyls (PCBs).

Analysis of samples from the Roaring Branch did not identify any VOCs, SVOCs or PCBs above detection limits. The only metal identified above detection limits was zinc. Zinc was quantified in SD-1 at 55 parts per million (ppm), SD-2 at 44 ppm and SD-3 at 65 ppm. The adjacent sample (SD-2) and downgradient sample (SD-3) concentrations do not exceed three times (3x) the background sample (SD-1) concentration. VOCs were not identified in sample SD-4. SVOCs detected include bis (2-ethylhexyl) phthalate at 30,000 parts per billion (ppb). Fluoranthene and pyrene detected but at concentrations less than the quantitation limit of 500 ppb. The only metals detected were zinc and arsenic were detected at 5,190 ppm and 3.3 ppm respectively. PCBs were detected at 14,000 ppb. Analytical results are compiled in Table 1 on the following page.

If you have any questions or need further information please feel free to contact me at the phone/fax number or address identified above.

Sincerely,

Michael W. Young
Asst. Hazardous Materials Specialist
Sites Management Section

Table 1
Former Jard Facility
Sediment Results
VOCs, SVOCs, Metals, PCBs
September 12, 1995

	SD-1	SD-2	SD-3	SD-4
Arsenic	ND	ND	ND	3.3
Zinc	55	44	65	5,190
VOCs	ND	ND	ND	ND
SVOCs	ND	ND	ND	-
Bis (2-ethylhexyl) phthalate	-	-	-	30,000 E
Pyrene	-	-	-	< 500
Fluoranthene	-	-	-	< 500
PCBs	ND	ND	ND	14,000

<: Compound detected but at a concentration less than the Practical
Quantitation Limit (PQL)

E: Estimated concentration

Figure 1
Former Jard Facility
EPA ID# VTD048141741
Sample Location Sketch

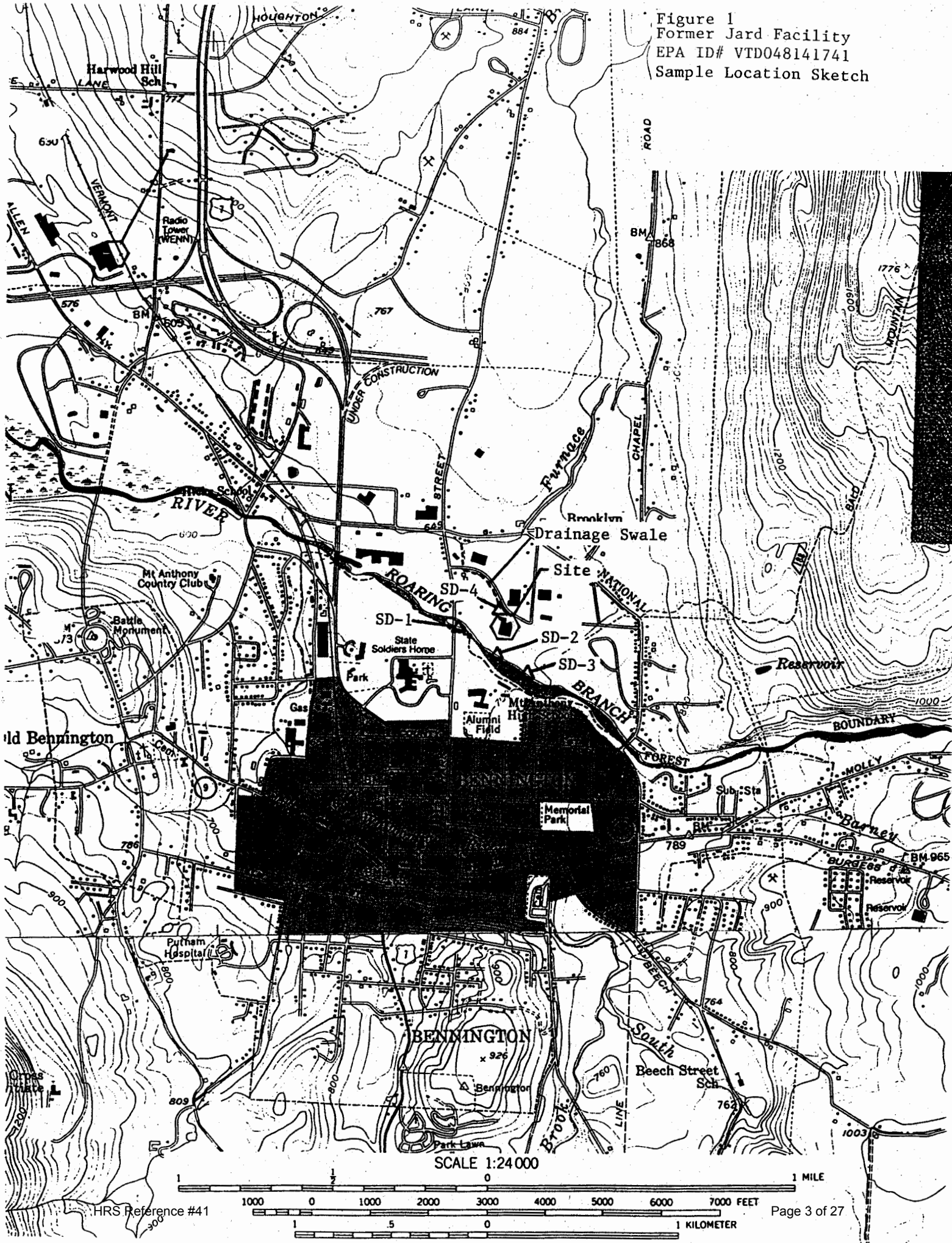


Figure 2
Former Jard Facility
EPA ID # VTD048141741
Site Sketch

Roaring
branch
river

Stream Bank
and
Riprap

Little League
Baseball
Fields

Drainage Swale

10'-15'
High
Berm

Discharge Pipe Outfall

TP-6

MW-6

Fence

Stored
Drums

Paved
Parking

Gate

TP-1
MW-1

Dry Well

Vent Pipes

Concrete Vault

Jard Building

WELL

Above Ground
Tank
Air Hopper

Propane
Tanks

MW-3
TP-3

Fence

MW-4

TP-4

Concrete Vault

MW-2

TP-2

Stacked Drums

Drum Storage Area

Paved Parking

Fence

5'-10'
High
Berm

Catch Basins

Gate

Bowen
Road

N

OCT 24 1995

10/24/95

Department of Environmental Conservation Laboratory
Analytical Results

GJD

Lab Id: 18154 Report To: M. Young
Location: Roaring Branch SD-1Phone: 241-3888 Date Collected: 9/12/95
Program: 49 7138 Chain of Custody? Yes

Notes:

Test Name		Result	Units	Remark Code	Over Hold?	Rel. % Diff.	Spiked Recovery Dups ? Percent
Antimony - Solid	<	5.00	mg/kg dw				
Arsenic - Solid	<	2.50	mg/kg dw				
Beryllium - Solid	<	.50	mg/kg dw				
Cadmium - Solid	<	5.00	mg/kg dw				
Chromium - Solid	<	25.0	mg/kg dw				
Copper - Solid	<	25.0	mg/kg dw				
Lead - Solid	<	25.0	mg/kg dw				
Mercury - Solid	<	.100	mg/kg dw				
Nickel - Solid	<	25.0	mg/kg dw				
Selenium - Solid	<	2.50	mg/kg dw				
Silver - Solid	<	.50	mg/kg dw				
Thallium - Solid	<	1.00	mg/kg dw				
Zinc - Solid		55.0	mg/kg dw				12

Remarks: E = Estimated Value

J = Value may be in Error

M = Sample Matrix Problem

N = Sample not Processed

P = Present, not Quantitated

Q = Insufficient Quantity

R = Results not Reported

W = Sample Warm on Arrival

HRS Reference #41

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Department of Environmental Conservation Laboratory
Method 8080 - PCB's/Pesticides in Solids

OCT 24 1995

GJD

Lab Id: 18154 Report To: M. Young
Location: Roaring Branch SD-1

Phone: 241-3888 Date Collected: 9/12/95
Program: 49 7138 Chain of Custody? Yes

Notes:

Date Analyzed: 9/29/95 Over hold? No Dilution: 1
Sample wt.: 10.0 g

Date extracted: 9/27/95
Percent moisture: 22

Parameter	Units are ug/kg dw PQL	Remark Result Code	Rel % Diff.	Spiked Dups ?	Percent Recovery
Aldrin	3	N.D.			
α -BHC	3	N.D.			
β -BHC	3	N.D.			
δ -BHC	3	N.D.			
Lindane	3	N.D.			
Chlordane	20	N.D.			
4,4'-DDD	3	N.D.			
4,4'-DDE	3	N.D.			
4,4'-DDT	3	N.D.			
Dieldrin	3	N.D.			
Endosulfan I	3	N.D.			
Endosulfan II	3	N.D.			
Endosulfan sulfate	3	N.D.			
Endrin	3	N.D.			
Endrin aldehyde	3	N.D.			
Heptachlor	3	N.D.			
Heptachlor epoxide	3	N.D.			
Methoxychlor	3	N.D.			
Toxaphene	60	N.D.			
PCB's	80	N.D.			
Dursban	3	N.D.			

Surrogate Percent Recoveries (S=Surrogate recovery out of range)

TMX Surrogate #1 . . . 74% DCB Surrogate #2 . . . 97%

Notes:

Remarks: E=Estimated Value J=Value may be in Error O=Value outside Standard Curve

10/24/95

Department of Environmental Conservation Laboratory
Method 8260 - Volatile Organics in Solids

OCT 24 1995

GJD

Lab Id: 18154 Report To: M. Young
Location: Roaring Branch SD-1

Phone: 241-3888 Date Collected: 9/12/95
Program: 49 7138 Chain of Custody? Yes

Notes:

Date Analyzed: 9/26/95 Over hold? No
Heated Purge Sample wt.: 4.7 g

Percent moisture: 21.6

Parameter	Units are ug/kg dw		Remark Code	Rel % Diff.	Spiked Dups ?	Percent Recovery
	PQL	Result				
Vinyl chloride	10	N.D.				
Chloromethane	10	N.D.				
Bromomethane	10	N.D.				
Chloroethane	10	N.D.				
Trichlorofluoromethane	10	N.D.				
Acetone	100	N.D.				
1,1-Dichloroethene	6	N.D.				
Carbon disulfide	100	N.D.				
Methylene chloride	6	N.D.				
Methyl-t-butylether (MTBE)	10	N.D.				
1,2-Dichloroethene	6	N.D.				
1,1-Dichloroethane	6	N.D.				
Vinyl acetate	60	N.D.				
2-Butanone	100	N.D.				
Chloroform	6	N.D.				
1,1,1-Trichloroethane	6	N.D.				
Carbon tetrachloride	6	N.D.				
Benzene	6	N.D.				
1,2-Dichloroethane	6	N.D.				
Trichloroethene	6	N.D.				
1,2-Dichloropropane	6	N.D.				
Bromodichloromethane	6	N.D.				
4-Methyl-2-pentanone	60	N.D.				
cis-1,2-Dichloropropene	6	N.D.				
Toluene	6	N.D.				
trans-1,3-Dichloropropene	6	N.D.				
1,1,2-Trichloroethane	6	N.D.				
2-Hexanone	60	N.D.				
Tetrachloroethene	6	N.D.				
Dibromochloromethane	6	N.D.				
Chlorobenzene	6	N.D.				
Ethylbenzene	6	N.D.				
Xylenes	6	N.D.				
Styrene	6	N.D.				
Bromoform	6	N.D.				
1,1,2,2-Tetrachloroethane	6	N.D.				
Total Volatile Hydrocarbons	100	N.D.				

Surrogate Percent Recoveries (S=Surrogate recovery out of range)

Dibromofluoromethane . 108% D8-Toluene 104% 4-Bromofluorobenzene . 94%

Notes:

Remarks: E=Estimated Value J=Value may be in Error O=Value outside Standard Curve

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Department of Environmental Conservation Laboratory
Analytical Results

GJD

Lab Id: 18155 Report To: M. Young
Location: Roaring Branch SD-2Phone: 241-3888 Date Collected: 9/12/95
Program: 49 7138 Chain of Custody? Yes

Notes:

Test Name		Result	Units	Remark Code	Over Hold?	Rel. % Diff.	Spiked Recovery Dups ? Percent
Antimony - Solid	<	5.00	mg/kg dw				
Arsenic - Solid	<	2.50	mg/kg dw				
Beryllium - Solid	<	.50	mg/kg dw				
Cadmium - Solid	<	5.00	mg/kg dw				
Chromium - Solid	<	25.0	mg/kg dw				
Copper - Solid	<	25.0	mg/kg dw				
Lead - Solid	<	25.0	mg/kg dw				
Mercury - Solid	<	.100	mg/kg dw				
Nickel - Solid	<	25.0	mg/kg dw				
Selenium - Solid	<	2.50	mg/kg dw				
Silver - Solid	<	.50	mg/kg dw				
Thallium - Solid	<	1.00	mg/kg dw				
Zinc - Solid		44.0	mg/kg dw				14

Remarks: E = Estimated Value

J = Value may be in Error

M = Sample Matrix Problem

N = Sample not Processed

P = Present, not Quantitated

Q = Insufficient Quantity

R = Results not Reported

W = Sample Warm on Arrival

HRS Reference #41

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Department of Environmental Conservation Laboratory
Method 8080 - PCB's/Pesticides in Solids

OCT 16 1995

GJD

Lab Id: 18155 Report To: M. Young
Location: Roaring Branch SD-2

Phone: 241-3888 Date Collected: 9/12/95
Program: 49 7138 Chain of Custody? Yes

Notes:

Date Analyzed: 9/29/95 Over hold? No Dilution: 1
Sample wt.: 10.0 g

Date extracted: 9/27/95
Percent moisture: 19

Parameter	Units are ug/kg dw PQL	Remark Result Code	Rel % Diff.	Spiked Dups ?	Percent Recovery
Aldrin	2	N.D.			
α -BHC	2	N.D.			
β -BHC	2	N.D.			
δ -BHC	2	N.D.			
Lindane	2	N.D.			
Chlordane	10	N.D.			
4,4'-DDD	2	N.D.			
4,4'-DDE	2	N.D.			
4,4'-DDT	2	N.D.			
Dieldrin	2	N.D.			
Endosulfan I	2	N.D.			
Endosulfan II	2	N.D.			
Endosulfan sulfate	2	N.D.			
Endrin	2	N.D.			
Endrin aldehyde	2	N.D.			
Heptachlor	2	N.D.			
Heptachlor epoxide	2	N.D.			
Methoxychlor	2	N.D.			
Toxaphene	60	N.D.			
PCB's	70	N.D.			
Dursban	2	N.D.			

Surrogate Percent Recoveries (S=Surrogate recovery out of range)

TMX Surrogate #1 . . . 80% DCB Surrogate #2 . . . 84%

Notes:

Remarks: E=Estimated Value J=Value may be in Error O=Value outside Standard Curve

10/13/95

Department of Environmental Conservation Laboratory
Method 8260 - Volatile Organics in Solids

OCT 16 1995

GJD

Lab Id: 18155 Report To: M. Young
Location: Roaring Branch SD-2

Phone: 241-3888 Date Collected: 9/12/95
Program: 49 7138 Chain of Custody? Yes

Notes:

Date Analyzed: 9/26/95 Over hold? No
Heated Purge Sample wt.: 6.0 g

Percent moisture: 19.4

Parameter	Units are ug/kg dw		Remark Code	Rel % Diff.	Spiked Dups ?	Percent Recovery
	PQL	Result				
Vinyl chloride	10	N.D.				
Chloromethane	10	N.D.				
Bromomethane	10	N.D.				
Chloroethane	10	N.D.				
Trichlorofluoromethane	10	N.D.				
Acetone	100	N.D.				
1,1-Dichloroethene	6	N.D.				
Carbon disulfide	100	N.D.				
Methylene chloride	6	N.D.				
Methyl-t-butylether (MTBE)	10	N.D.				
1,2-Dichloroethene	6	N.D.				
1,1-Dichloroethane	6	N.D.				
Vinyl acetate	60	N.D.				
2-Butanone	100	N.D.				
Chloroform	6	N.D.				
1,1,1-Trichloroethane	6	N.D.				
Carbon tetrachloride	6	N.D.				
Benzene	6	N.D.				
1,2-Dichloroethane	6	N.D.				
Trichloroethene	6	N.D.				
1,2-Dichloropropane	6	N.D.				
Bromodichloromethane	6	N.D.				
4-Methyl-2-pentanone	60	N.D.				
cis-1,2-Dichloropropene	6	N.D.				
Toluene	6	N.D.				
trans-1,3-Dichloropropene	6	N.D.				
1,1,2-Trichloroethane	6	N.D.				
2-Hexanone	60	N.D.				
Tetrachloroethene	6	N.D.				
Dibromochloromethane	6	N.D.				
Chlorobenzene	6	N.D.				
Ethylbenzene	6	N.D.				
Xylenes	6	N.D.				
Styrene	6	N.D.				
Bromoform	6	N.D.				
1,1,2,2-Tetrachloroethane	6	N.D.				
Total Volatile Hydrocarbons	100	N.D.				

Surrogate Percent Recoveries (S=Surrogate recovery out of range)

Dibromofluoromethane . 104% D8-Toluene 104% 4-Bromofluorobenzene . 94%

Notes:

Remarks: E=Estimated Value J=Value may be in Error O=Value outside Standard Curve

10/13/95

Department of Environmental Conservation Laboratory
Method 8270 - Semivolatile Organics in Solids

OCT 16 1995

GJD

Lab Id: 18155 Report To: M. Young
Location: Roaring Branch SD-2Phone: 241-3888 Date Collected: 9/12/95
Program: 49 7138 Chain of Custody? Yes

Notes:

Date Analyzed: 10/11/95 Over hold? No Dilution: 1
Sample wt.: 11.2 gDate extracted: 9/14/95
Percent moisture: 19

Parameter	Units are ug/kg dw PQL	Result	Remark Code	Rel % Diff.	Spiked Dups ?	Percent Recovery
N-Nitrosodimethylamine	600	N.D.				
Aniline	600	N.D.				
Phenol	600	N.D.				
Bis(2-chloroethyl)ether	600	N.D.				
2-Chlorophenol	1000	N.D.				
1,3-Dichlorobenzene	600	N.D.				
1,4-Dichlorobenzene	600	N.D.				
1,2-Dichlorobenzene	600	N.D.				
Benzylalcohol	1000	N.D.				
2-Methylphenol	600	N.D.				
Bis(2-chloroisopropyl)ether	600	N.D.				
Hexachloroethane	600	N.D.				
4-Methylphenol	600	N.D.				
N-Nitroso-di-n-propylamine	600	N.D.				
Nitrobenzene	600	N.D.				
Isophorone	600	N.D.				
2-Nitrophenol	1000	N.D.				
2,4-Dimethylphenol	600	N.D.				
Bis(2-chloroethoxy)methane	600	N.D.				
2,4-Dichlorophenol	1000	N.D.				
1,2,4-Trichlorobenzene	600	N.D.				
Naphthalene	600	N.D.				
Benzoic acid	6000	N.D.				
4-Chloroaniline	600	N.D.				
Hexachlorobutadiene	600	N.D.				
4-Chloro-3-methylphenol	1000	N.D.				
2-Methylnaphthalene	600	N.D.				
Hexachlorocyclopentadiene	600	N.D.				
2,4,6-Trichlorophenol	1000	N.D.				
2,4,5-Trichlorophenol	1000	N.D.				
2-Chloronaphthalene	600	N.D.				
2-Nitroaniline	2000	N.D.				
Acenaphthylene	600	N.D.				
Dimethylphthalate	1000	N.D.				
2,6-Dinitrotoluene	1000	N.D.				
Acenaphthene	600	N.D.				
3-Nitroaniline	6000	N.D.				
2,4-Dinitrophenol	6000	N.D.				
Dibenzofuran	600	N.D.				
2,4-Dinitrotoluene	1000	N.D.				
4-Nitrophenol	6000	N.D.				
Fluorene	600	N.D.				
4-Chlorophenyl phenyl ether	600	N.D.				
Diethylphthalate	1000	N.D.				
4-Nitroaniline	6000	N.D.				
4,6-Dinitro-2-methylphenol	6000	N.D.				
N-Nitrosodiphenylamine	600	N.D.				
Azobenzene	600	N.D.				
4-Bromophenyl phenyl ether	600	N.D.				

Remarks: E=Estimated Value J=Value may be in Error O=Value outside Standard Curve

HRS Reference #41

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Department of Environmental Conservation Laboratory
Method 8270 - Semivolatile Organics in Solids

OCT 16 1995

GJD

Lab Id: 18155 Report To: M. Young
Location: Roaring Branch SD-2

Phone: 241-3888 Date Collected: 9/12/95
Program: 49 7138 Chain of Custody? Yes

Notes:

Date Analyzed: 10/11/95 Over hold? No Dilution: 1
Sample wt.: 11.2 g

Date extracted: 9/14/95
Percent moisture: 19

Parameter	Units are ug/kg dw PQL	Remark Result Code	Rel % Diff.	Spiked Dups ?	Percent Recovery
Hexachlorobenzene	600	N.D.			
Pentachlorophenol	2000	N.D.			
Phenanthrene	600	N.D.			
Anthracene	600	N.D.			
Di-n-butylphthalate	1000	N.D.			
Fluoranthene	600	N.D.			
Pyrene	600	N.D.			
Butyl benzyl phthalate	1000	N.D.			
Benzo[a]anthracene	600	N.D.			
Chrysene	600	N.D.			
3,3'-Dichlorobenzidine	6000	N.D.			
Bis(2-ethylhexyl)phthalate	1000	N.D.			
Benzo[b]fluoranthene	600	N.D.			
Benzo[k]fluoranthene	600	N.D.			
Di-n-octylphthalate	600	N.D.			
Benzo[a]pyrene	600	N.D.			
Indeno[1,2,3,cd]pyrene	600	N.D.			
Dibenz[a,h]anthracene	600	N.D.			
Benzo[g,h,i]perylene	600	N.D.			
C-3 Alkylbenzene isomers	600	N.D.			
C-4 Alkylbenzene isomers	600	N.D.			
1-Methylnaphthalene	600	N.D.			
Dimethylnaphthalene isomers	600	N.D.			
Trimethylnaphthalene isomers	600	N.D.			

Surrogate Percent Recoveries (S=Surrogate recovery out of range)

Fluorophenol	95%	Phenol-D6	54%	Nitrobenzene-D5	58%
2-Fluorobiphenyl	59%	2,3,6-Tribromophenol	51% S	4-Terphenyl-D14	113%

Notes:

Remarks: E=Estimated Value J=Value may be in Error O=Value outside Standard Curve

OCT 18 1995

10/18/95

Department of Environmental Conservation Laboratory
Analytical Results

GJD

Lab Id: 18156 Report To: M. Young
Location: Roaring Branch SD-3

Phone: 241-3888 Date Collected: 9/12/95
Program: 49 7138 Chain of Custody? Yes

Notes:

Test Name		Result	Units	Remark Code	Over Hold?	Rel. % Diff.	Spiked Dups ?	Recovery Percent
Antimony - Solid	<	5.00	mg/kg dw					
Arsenic - Solid	<	2.50	mg/kg dw			8	Y	78
Beryllium - Solid	<	.50	mg/kg dw			6	Y	110
Cadmium - Solid	<	5.00	mg/kg dw			5	Y	91
Chromium - Solid	<	25.0	mg/kg dw			11	Y	85
Copper - Solid	<	25.0	mg/kg dw			8	Y	92
Lead - Solid	<	25.0	mg/kg dw			11	Y	97
Mercury - Solid	<	.100	mg/kg dw					
Nickel - Solid	<	25.0	mg/kg dw			3	Y	89
Selenium - Solid	<	2.50	mg/kg dw			10	Y	77
Silver - Solid	<	.50	mg/kg dw			6	Y	88
Thallium - Solid	<	1.00	mg/kg dw			4	Y	83
Zinc - Solid		65.0	mg/kg dw	M		31		98

OCT 18 1995

10/18/95

Department of Environmental Conservation Laboratory
Method 8260 - Volatile Organics in Solids

GJD

Lab Id: 18156 Report To: M. Young
Location: Roaring Branch SD-3Phone: 241-3888 Date Collected: 9/12/95
Program: 49 7138 Chain of Custody? Yes

Notes:

Date Analyzed: 9/26/95 Over hold? No
Heated Purge Sample wt.: 5.2 g

Percent moisture: 34.9

Parameter	Units are ug/kg dw		Remark Code	Rel % Diff.	Spiked Dups ?	Percent Recovery
	PQL	Result				
Vinyl chloride	20	N.D.				
Chloromethane	20	N.D.				
Bromomethane	20	N.D.				
Chloroethane	20	N.D.				
Trichlorofluoromethane	20	N.D.				
Acetone	200	N.D.				
1,1-Dichloroethene	8	N.D.				
Carbon disulfide	200	N.D.				
Methylene chloride	8	N.D.				
Methyl-t-butylether (MTBE)	20	N.D.				
1,2-Dichloroethene	8	N.D.				
1,1-Dichloroethane	8	N.D.				
Vinyl acetate	80	N.D.				
2-Butanone	200	N.D.				
Chloroform	8	N.D.				
1,1,1-Trichloroethane	8	N.D.				
Carbon tetrachloride	8	N.D.				
Benzene	8	N.D.				
1,2-Dichloroethane	8	N.D.				
Trichloroethene	8	N.D.				
1,2-Dichloropropane	8	N.D.				
Bromodichloromethane	8	N.D.				
4-Methyl-2-pentanone	80	N.D.				
cis-1,2-Dichloropropene	8	N.D.				
Toluene	8	N.D.				
trans-1,3-Dichloropropene	8	N.D.				
1,1,2-Trichloroethane	8	N.D.				
2-Hexanone	80	N.D.				
Tetrachloroethene	8	N.D.				
Dibromochloromethane	8	N.D.				
Chlorobenzene	8	N.D.				
Ethylbenzene	8	N.D.				
Xylenes	8	N.D.				
Styrene	8	N.D.				
Bromoform	8	N.D.				
1,1,2,2-Tetrachloroethane	8	N.D.				
Total Volatile Hydrocarbons	200	N.D.				

Surrogate Percent Recoveries (S=Surrogate recovery out of range)

Dibromofluoromethane . 106% D8-Toluene 106% 4-Bromofluorobenzene . 90%

Notes:

Remarks: E=Estimated Value J=Value may be in Error O=Value outside Standard Curve

OCT 18 1995

10/18/95

Department of Environmental Conservation Laboratory
Method 8270 - Semivolatile Organics in Solids

GJD

Lab Id: 18156 Report To: M. Young
Location: Roaring Branch SD-3

Phone: 241-3888 Date Collected: 9/12/95
Program: 49 7138 Chain of Custody? Yes

Notes:

Date Analyzed: 10/12/95 Over hold? No Dilution: 1
Sample wt.: 12.0 g

Date extracted: 9/14/95
Percent moisture: 35

Parameter	Units are ug/kg dw PQL	Remark Result Code	Rel % Diff.	Spiked Dups ?	Percent Recovery
N-Nitrosodimethylamine	600	N.D.			
Aniline	600	N.D.			
Phenol	600	N.D.			
Bis(2-chloroethyl)ether	600	N.D.			
2-Chlorophenol	1000	N.D.			
1,3-Dichlorobenzene	600	N.D.			
1,4-Dichlorobenzene	600	N.D.			
1,2-Dichlorobenzene	600	N.D.			
Benzylalcohol	1000	N.D.			
2-Methylphenol	600	N.D.			
Bis(2-chloroisopropyl)ether	600	N.D.			
Hexachloroethane	600	N.D.			
4-Methylphenol	600	N.D.			
N-Nitroso-di-n-propylamine	600	N.D.			
Nitrobenzene	600	N.D.			
Isophorone	600	N.D.			
2-Nitrophenol	1000	N.D.			
2,4-Dimethylphenol	600	N.D.			
Bis(2-chloroethoxy)methane	600	N.D.			
2,4-Dichlorophenol	1000	N.D.			
1,2,4-Trichlorobenzene	600	N.D.			
Naphthalene	600	N.D.			
Benzoic acid	6000	N.D.			
4-Chloroaniline	600	N.D.			
Hexachlorobutadiene	600	N.D.			
4-Chloro-3-methylphenol	1000	N.D.			
2-Methylnaphthalene	600	N.D.			
Hexachlorocyclopentadiene	600	N.D.			
2,4,6-Trichlorophenol	1000	N.D.			
2,4,5-Trichlorophenol	1000	N.D.			
2-Chloronaphthalene	600	N.D.			
2-Nitroaniline	3000	N.D.			
Acenaphthylene	600	N.D.			
Dimethylphthalate	1000	N.D.			
2,6-Dinitrotoluene	1000	N.D.			
Acenaphthene	600	N.D.			
3-Nitroaniline	6000	N.D.			
2,4-Dinitrophenol	6000	N.D.			
Dibenzofuran	600	N.D.			
2,4-Dinitrotoluene	1000	N.D.			
4-Nitrophenol	6000	N.D.			
Fluorene	600	N.D.			
4-Chlorophenyl phenyl ether	600	N.D.			
Diethylphthalate	1000	N.D.			
4-Nitroaniline	6000	N.D.			
4,6-Dinitro-2-methylphenol	6000	N.D.			
N-Nitrosodiphenylamine	600	N.D.			
Azobenzene	600	N.D.			
4-Bromophenyl phenyl ether	600	N.D.			

Remarks: E=Estimated Value J=Value may be in Error O=Value outside Standard Curve

OCT 18 1995

10/18/95

Department of Environmental Conservation Laboratory
Method 8270 - Semivolatile Organics in Solids

GJD

Lab Id: 18156 Report To: M. Young
Location: Roaring Branch SD-3Phone: 241-3888 Date Collected: 9/12/95
Program: 49 7138 Chain of Custody? Yes

Notes:

Date Analyzed: 10/12/95 Over hold? No Dilution: 1
Sample wt.: 12.0 gDate extracted: 9/14/95
Percent moisture: 35

Parameter	Units are ug/kg dw PQL	Result	Remark Code	Rel % Diff.	Spiked Dups ?	Percent Recovery
Hexachlorobenzene	600	N.D.				
Pentachlorophenol	3000	N.D.				
Phenanthrene	600	N.D.				
Anthracene	600	N.D.				
Di-n-butylphthalate	1000	N.D.				
Fluoranthene	600	N.D.				
Pyrene	600	N.D.				
Butyl benzyl phthalate	1000	N.D.				
Benzo[a]anthracene	600	N.D.				
Chrysene	600	N.D.				
3,3'-Dichlorobenzidine	6000	N.D.				
Bis(2-ethylhexyl)phthalate	1000	N.D.				
Benzo[b]fluoranthene	600	N.D.				
Benzo[k]fluoranthene	600	N.D.				
Di-n-octylphthalate	600	N.D.				
Benzo[a]pyrene	600	N.D.				
Indeno[1,2,3,cd]pyrene	600	N.D.				
Dibenz[a,h]anthracene	600	N.D.				
Benzo[g,h,i]perylene	600	N.D.				
C-3 Alkylbenzene isomers	600	N.D.				
C-4 Alkylbenzene isomers	600	N.D.				
1-Methylnaphthalene	600	N.D.				
Dimethylnaphthalene isomers	600	N.D.				
Trimethylnaphthalene isomers	600	N.D.				

Surrogate Percent Recoveries (S=Surrogate recovery out of range)

Fluorophenol	95%	Phenol-D6.	64%	Nitrobenzene-D5.	75%
2-Fluorobiphenyl	68%	2,3,6-Tribromophenol	73%	4-Terphenyl-D14.	112%

Notes:

Remarks: E=Estimated Value J=Value may be in Error O=Value outside Standard Curve

10/18/95

Department of Environmental Conservation Laboratory
Method 8080 - PCB's/Pesticides in Solids

OCT 18 1995

GJD

Lab Id: 18156 Report To: M. Young
Location: Roaring Branch SD-3

Phone: 241-3888 Date Collected: 9/12/95
Program: 49 7138 Chain of Custody? Yes

Notes:

Date Analyzed: 9/29/95 Over hold? No Dilution: 1
Sample wt.: 10.0 g

Date extracted: 9/27/95
Percent moisture: 34.9

Parameter	Units are ug/kg dw PQL	Remark Result Code	Rel % Diff.	Spiked Dups ?	Percent Recovery
Aldrin	3	N.D.			
α -BHC	3	N.D.			
β -BHC	3	N.D.			
δ -BHC	3	N.D.			
Lindane	3	N.D.			
Chlordane	20	N.D.			
4,4'-DDD	3	N.D.			
4,4'-DDE	3	N.D.			
4,4'-DDT	3	N.D.			
Dieldrin	3	N.D.			
Endosulfan I	3	N.D.			
Endosulfan II	3	N.D.			
Endosulfan sulfate	3	N.D.			
Endrin	3	N.D.			
Endrin aldehyde	3	N.D.			
Heptachlor	3	N.D.			
Heptachlor epoxide	3	N.D.			
Methoxychlor	3	N.D.			
Toxaphene	80	N.D.			
PCB's	90	N.D.			
Dursban	3	N.D.			

Surrogate Percent Recoveries (S=Surrogate recovery out of range)

TMX Surrogate #1 . . . 77% DCB Surrogate #2 . . . 88%

Notes:

10/18/95

Department of Environmental Conservation Laboratory
Analytical Results

OCT 18 1995

GJD

Lab Id: 18157 Report To: M. Young
Location: Drainage Swale SD-4Phone: 241-3888 Date Collected: 9/12/95
Program: 49 7138 Chain of Custody? Yes

Notes:

Test Name		Result	Units	Remark Code	Over Hold?	Rel. % Diff.	Spiked Recovery Dups ? Percent
Antimony - Solid	<	5.00	mg/kg dw	M		28	69
Arsenic - Solid		3.30	mg/kg dw			22	
Beryllium - Solid	<	.50	mg/kg dw				
Cadmium - Solid	<	5.00	mg/kg dw				
Chromium - Solid	<	25.0	mg/kg dw				
Copper - Solid		316.	mg/kg dw			4	
Lead - Solid		80.0	mg/kg dw			15	
Mercury - Solid	<	.100	mg/kg dw				
Nickel - Solid	<	25.0	mg/kg dw				
Selenium - Solid	<	2.50	mg/kg dw				
Silver - Solid	<	.50	mg/kg dw				
Thallium - Solid	<	1.00	mg/kg dw				
Zinc - Solid		5,190.	mg/kg dw			9	

Remarks: E = Estimated Value

J = Value may be in Error

M = Sample Matrix Problem

N = Sample not Processed

P = Present, not Quantitated

Q = Insufficient Quantity

R = Results not Reported

W = Sample Warm on Arrival

HRS Reference #41

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Department of Environmental Conservation Laboratory
Method 8260 - Volatile Organics in Solids

GJD

Lab Id: 18157 Report To: M. Young
Location: Drainage Swale SD-4Phone: 241-3888 Date Collected: 9/12/95
Program: 49 7138 Chain of Custody? Yes

Notes:

Date Analyzed: 9/26/95 Over hold? No
Heated Purge Sample wt.: 5.1 g

Percent moisture: 15.1

Parameter	Units are ug/kg dw PQL	Remark Result Code	Rel % Diff.	Spiked Dups ?	Percent Recovery
Vinyl chloride	10	N.D.			
Chloromethane	10	N.D.			
Bromomethane	10	N.D.			
Chloroethane	10	N.D.			
Trichlorofluoromethane	10	N.D.			
Acetone	100	N.D.			
1,1-Dichloroethene	6	N.D.			
Carbon disulfide	100	N.D.			
Methylene chloride	6	N.D.			
Methyl-t-butylether (MTBE)	10	N.D.			
1,2-Dichloroethene	6	N.D.			
1,1-Dichloroethane	6	N.D.			
Vinyl acetate	60	N.D.			
2-Butanone	100	N.D.			
Chloroform	6	N.D.			
1,1,1-Trichloroethane	6	N.D.			
Carbon tetrachloride	6	N.D.			
Benzene	6	N.D.			
1,2-Dichloroethane	6	N.D.			
Trichloroethene	6	N.D.			
1,2-Dichloropropane	6	N.D.			
Bromodichloromethane	6	N.D.			
4-Methyl-2-pentanone	60	N.D.			
cis-1,2-Dichloropropene	6	N.D.			
Toluene	6	N.D.			
trans-1,3-Dichloropropene	6	N.D.			
1,1,2-Trichloroethane	6	N.D.			
2-Hexanone	60	N.D.			
Tetrachloroethene	6	N.D.			
Dibromochloromethane	6	N.D.			
Chlorobenzene	6	N.D.			
Ethylbenzene	6	N.D.			
Xylenes	6	N.D.			
Styrene	6	N.D.			
Bromoform	6	N.D.			
1,1,2,2-Tetrachloroethane	6	N.D.			
Total Volatile Hydrocarbons	100	N.D.			

Surrogate Percent Recoveries (S=Surrogate recovery out of range)

Dibromofluoromethane . 110% DB-Toluene 102% 4-Bromofluorobenzene . 86%

Notes:

OCT 18 1995

10/18/95

Department of Environmental Conservation Laboratory
Method 8270 - Semivolatile Organics in Solids

GJD

Lab Id: 18157 Report To: M. Young
Location: Drainage Swale SD-4Phone: 241-3888 Date Collected: 9/12/95
Program: 49 7138 Chain of Custody? Yes

Notes:

Date Analyzed: 10/13/95 Over hold? No Dilution: 1
Sample wt.: 12.7 gDate extracted: 9/14/95
Percent moisture: 15

Parameter	Units are ug/kg dw PQL	Remark Result Code	Rel % Diff.	Spiked Dups ?	Percent Recovery
N-Nitrosodimethylamine	500	N.D.			
Aniline	500	N.D.			
Phenol	500	N.D.			
Bis(2-chloroethyl)ether	500	N.D.			
2-Chlorophenol	900	N.D.			
1,3-Dichlorobenzene	500	N.D.			
1,4-Dichlorobenzene	500	N.D.			
1,2-Dichlorobenzene	500	N.D.			
Benzylalcohol	900	N.D.			
2-Methylphenol	500	N.D.			
Bis(2-chloroisopropyl)ether	500	N.D.			
Hexachloroethane	500	N.D.			
4-Methylphenol	500	N.D.			
N-Nitroso-di-n-propylamine	500	N.D.			
Nitrobenzene	500	N.D.			
Isophorone	500	N.D.			
2-Nitrophenol	900	N.D.			
2,4-Dimethylphenol	500	N.D.			
Bis(2-chloroethoxy)methane	500	N.D.			
2,4-Dichlorophenol	900	N.D.			
1,2,4-Trichlorobenzene	500	N.D.			
Naphthalene	500	N.D.			
Benzoic acid	5000	N.D.			
4-Chloroaniline	500	N.D.			
Hexachlorobutadiene	500	N.D.			
4-Chloro-3-methylphenol	900	N.D.			
2-Methylnaphthalene	500	N.D.			
Hexachlorocyclopentadiene	500	N.D.			
2,4,6-Trichlorophenol	900	N.D.			
2,4,5-Trichlorophenol	900	N.D.			
2-Chloronaphthalene	500	N.D.			
2-Nitroaniline	2000	N.D.			
Acenaphthylene	500	N.D.			
Dimethylphthalate	900	N.D.			
2,6-Dinitrotoluene	900	N.D.			
Acenaphthene	500	N.D.			
3-Nitroaniline	5000	N.D.			
2,4-Dinitrophenol	5000	N.D.			
Dibenzofuran	500	N.D.			
2,4-Dinitrotoluene	900	N.D.			
4-Nitrophenol	5000	N.D.			
Fluorene	500	N.D.			
4-Chlorophenyl phenyl ether	500	N.D.			
Diethylphthalate	900	N.D.			
4-Nitroaniline	5000	N.D.			
4,6-Dinitro-2-methylphenol	5000	N.D.			
N-Nitrosodiphenylamine	500	N.D.			
Azobenzene	500	N.D.			
4-Bromophenyl phenyl ether	500	N.D.			

Remarks: E=Estimated Value J=Value may be in Error O=Value outside Standard Curve

OCT 18 1995

10/18/95

Department of Environmental Conservation Laboratory
Method 8270 - Semivolatile Organics in Solids

GJD

Lab Id: 18157 Report To: M. Young
Location: Drainage Swale SD-4Phone: 241-3888 Date Collected: 9/12/95
Program: 49 7138 Chain of Custody? Yes

Notes:

Date Analyzed: 10/13/95 Over hold? No Dilution: 1
Sample wt.: 12.7 gDate extracted: 9/14/95
Percent moisture: 15

Parameter	Units are ug/kg dw PQL	Result	Remark Code	Rel % Diff.	Spiked Dups ?	Percent Recovery
Hexachlorobenzene	500	N.D.				
Pentachlorophenol	2000	N.D.				
Phenanthrene	500	N.D.				
Anthracene	500	N.D.				
Di-n-butylphthalate	900	N.D.				
Fluoranthene	500	<500				
Pyrene	500	<500				
Butyl benzyl phthalate	900	N.D.				
Benzo[a]anthracene	500	N.D.				
Chrysene	500	N.D.				
3,3'-Dichlorobenzidine	5000	N.D.				
Bis(2-ethylhexyl)phthalate	900	30000	E			
Benzo[b]fluoranthene	500	N.D.				
Benzo[k]fluoranthene	500	N.D.				
Di-n-octylphthalate	500	N.D.				
Benzo[a]pyrene	500	N.D.				
Indeno[1,2,3,cd]pyrene	500	N.D.				
Dibenz[a,h]anthracene	500	N.D.				
Benzo[g,h,i]perylene	500	N.D.				
C-3 Alkylbenzene isomers	500	N.D.				
C-4 Alkylbenzene isomers	500	N.D.				
1-Methylnaphthalene	500	N.D.				
Dimethylnaphthalene isomers	500	N.D.				
Trimethylnaphthalene isomers	500	N.D.				

Surrogate Percent Recoveries (S=Surrogate recovery out of range)

Fluorophenol	110% S	Phenol-D6	76%	Nitrobenzene-D5	90%
2-Fluorobiphenyl	94%	2,3,6-Tribromophenol	93%	4-Terphenyl-D14	99%

Notes: GC/MS also detected isomers of Tetrachlorobiphenyls. These are constituents of PCBs.

Remarks: E=Estimated Value J=Value may be in Error O=Value outside Standard Curve

OCT 18 1995

10/18/95

Department of Environmental Conservation Laboratory
Method 8080 - PCB's/Pesticides in Solids

GJD

Lab Id: 18157 Report To: M. Young
Location: Drainage Swale SD-4

Phone: 241-3888 Date Collected: 9/12/95
Program: 49 7138 Chain of Custody? Yes

Notes:

Date Analyzed: 10/04/95 Over hold? No Dilution: 100
Sample wt.: 10.0 g

Date extracted: 10/03/95
Percent moisture: 15

Parameter	Units are ug/kg dw PQL	Remark Result Code	Rel % Diff.	Spiked Dups ?	Percent Recovery
Aldrin	200	N.D.			
α -BHC	200	N.D.			
β -BHC	200	N.D.			
δ -BHC	200	N.D.			
Lindane	200	N.D.			
Chlordane	1000	N.D.			
4,4'-DDD	200	N.D.			
4,4'-DDE	200	N.D.			
4,4'-DDT	200	N.D.			
Dieldrin	200	N.D.			
Endosulfan I	200	N.D.			
Endosulfan II	200	N.D.			
Endosulfan sulfate	200	N.D.			
Endrin	200	N.D.			
Endrin aldehyde	200	N.D.			
Heptachlor	200	N.D.			
Heptachlor epoxide	200	N.D.			
Methoxychlor	200	N.D.			
Toxaphene	6000	N.D.			
PCB's	7000	14000		69	
Dursban	200	N.D.			

Surrogate Percent Recoveries (S=Surrogate recovery out of range)

TMX Surrogate #1 . . . 91% DCB Surrogate #2 . . . 70%

Notes: Sample extracted in triplicate 9/27/95 and 10/3/95. PCBs detected similar in distribution to those in aroclor 1242.

Remarks: E=Estimated Value J=Value may be in Error O=Value outside Standard Curve

9/29/95

Department of Environmental Conservation Laboratory
Method 8260 - Volatile Organics in Water

GJD

Lab Id: 18158 Report To: M. Young
Location: Trip BlankPhone: 241-3888 Date Collected: 9/12/95
Program: 49 7138 Chain of Custody? Yes

Notes:

Date Analyzed: 9/26/95 Over hold? No Dilution: 1

Parameter	Units are ug/l		Remark Code	Rel % Diff.	Spiked Dups ?	Percent Recovery
	PQL	Result				
Vinyl chloride	10	N.D.				
Chloromethane	10	N.D.				
Bromomethane	10	N.D.				
Chloroethane	10	N.D.				
Trichlorofluoromethane	10	N.D.				
Acetone	100	N.D.				
1,1-Dichloroethene	5	N.D.				
Carbon disulfide	100	N.D.				
Methylene chloride	5	N.D.				
Methyl-t-butylether (MTBE)	5	N.D.				
1,2-Dichloroethene	5	N.D.				
1,1-Dichloroethane	5	N.D.				
Vinyl acetate	50	N.D.				
2-Butanone	100	N.D.				
Chloroform	5	N.D.				
1,1,1-Trichloroethane	5	N.D.				
Carbon tetrachloride	5	N.D.				
Benzene	5	N.D.				
1,2-Dichloroethane	5	N.D.				
Trichloroethene	5	N.D.				
1,2-Dichloropropane	5	N.D.				
Bromodichloromethane	5	N.D.				
4-Methyl-2-pentanone	50	N.D.				
cis-1,2-Dichloropropene	5	N.D.				
Toluene	5	N.D.				
trans-1,3-Dichloropropene	5	N.D.				
1,1,2-Trichloroethane	5	N.D.				
2-Hexanone	50	N.D.				
Tetrachloroethene	5	N.D.				
Dibromochloromethane	5	N.D.				
Chlorobenzene	5	N.D.				
Ethylbenzene	5	N.D.				
Xylenes	5	N.D.				
Styrene	5	N.D.				
Bromoform	5	N.D.				
1,1,2,2-Tetrachloroethane	5	N.D.				
Total Volatile Hydrocarbons	100	N.D.				

Surrogate Percent Recoveries (S=Surrogate recovery out of range)

Dibromofluoromethane . 94% DB-Toluene 118% 4-Bromofluorobenzene . 92%

Notes:

Remarks: E=Estimated Value J=Value may be in Error O=Value outside Standard Curve

[illegible]

and cleared areas encompass approximately 4 acres, while the remainder of the Site is wooded, and extends south to the Roaring Branch of the Walloomsac River.

The topography of the Site is generally level around the building. Southwestern portions of the building extend into excavated areas of a 40-foot high gravel bank beyond which the Roaring Branch of the Walloomsac River is located. A small seasonally flowing drainage swale begins in areas adjacent to the northwestern corner of the Site, and continues in a northwestern direction along Bowen Road.

During the PA/SI, stained areas of soil were noted next to southern and eastern exterior portions of the Site building. PCB screening analyses performed during the removal action indicated the presence of PCBs in these areas.

Also noted during the PA/SI, and addressed during the removal action, were the following features located outside of the Site building: two drywells; a concrete underground storage tank; and an aboveground steel storage tank; all of which are located in areas south of the building.

Prior to the Fund-lead removal action, the court-appointed trustee for Jard constructed a 6-foot high fence around the Site building to limit access. The fence remains intact and locked. Keys for access to the Site can be obtained from the Vermont Department of Environmental Conservation (DEC) or EPA representatives.

2.3 Cause of Release

Jard manufactured small capacitors, non-fluid transformers and motors from 1969 to 1989. The oil-filled capacitors were wound, assembled, impregnated with oil, degreased, tested and painted. The transformers were wound, assembled, varnished and tested. Originally, the capacitors were filled with PCB oil. At some time in the 1970s, Jard replaced the PCB oil with DOP¹ oil.

The facility's former hazardous waste coordinator indicated that prior to approximately 1987, non-contact process water, used in the production of capacitors, was fed from the facility into an underground cement tank located outside of the Site building. However, the process piping to the underground tank was not a closed system, and it was possible for employees to dump waste into this cement tank via raised floor drains. Therefore, the underground tank may have been contaminated with waste material, including PCBs.

¹ DOP is also referred to as bis (2-ethylhexyl) phthalate or BEHP.

State of Vermont
R.A. LaRosa State Environmental Laboratory
Sampling Plan

only 4 digits

Program Name: <u>Management Assistance</u>	Program Number: <u>049</u>	Activity Code: <u>60138</u>
Name of Contact Person: <u>Mike Young</u>	Site ID: <u>770138</u>	
Address: <u>103 S. Main St</u>		
Telephone #: () <u>241-3888</u>		Fax #: ()
Suspected Contaminant(s) and Concentration Range: <u>Di-n-octylphthalate</u>		
Comments:		

Parameter	Matrix	Total Number of Samples(include dups)	Frequency of Collection
8260S	<u>soil/sediment</u>	<u>10</u>	<u>Single time</u>
8270S	"		
8080S	"		
P.P.M	"		

Sampling equipment to be supplied by the Laboratory (check those needed – list others):
 cooler ___ ice ___ laboratory water ☒ pH paper ___

Pickup date(s) for sample containers: <u>9/11/95</u>	Method of delivering samples to the Laboratory (courier, in person): <u>In Person</u>	Date(s) of sample delivery: <u>9/13/95</u>
Is Project Specific QA/QC Required: Yes ___ No <input checked="" type="checkbox"/>		
Faster than 30-day turn-around required Yes ___ No <input checked="" type="checkbox"/> ; if yes, required turnaround is ___ days.		
Chain of Custody Required: Yes <input checked="" type="checkbox"/> No ___		
Is this a regularly scheduled sampling event Yes ___ No <input checked="" type="checkbox"/> if yes, no additional sampling plan is required. Please call to discuss if any answer is yes.		
Which EPA regulations need to be followed (check one): Refer to Quality Assurance Plan for default procedure if nothing is checked: CWA ___ RCRA ___ CERCLA <input checked="" type="checkbox"/> CAA ___ OTHER ___		

Send completed Sampling Plan at least one week prior to sampling event to:

R.A. LaRosa State Environmental Laboratory
 103 South Main Street
 Waterbury, VT 05671-0409
 Tel: (802) 244-4520
 Fax: (802) 241-3008

LV101-0000.94

INSTRUCTIONS ON BACK OF THIS FORM

**SAMPLING
AREA**

DESCRIPTION

1. Adjacent to the outside storage area. Soil samples JC01 and JC02.
2. Adjacent to building near paint spray area. Soil samples JC03 and JC04. Water sample JC05 and sediment sample JC06 from inside concrete vault.
- 3A. Adjacent to building near zinc disposal hopper. Soil samples JC07 and JC08.

- 3B. Adjacent to building in area of historical PCB spill. Soil samples JC09 and JC10. Water samples JC11 and JC12 from open stand pipe. Sediment sample JC14 from inside concrete vault.
4. Inside west side of building. Sediment sample JC13 in floor drain area beneath grate.
5. Along fence line on west side of property next to little league field. Soil sample JC15.
6. Gravel lot adjacent to loading

